

SYSTEM FOR COMMERCIAL LAUNDRY SERVICES AND FACILITIES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present patent application claims priority to each of the following: U.S. Provisional Patent Application Ser. No. 62/220,174, filed on Sep. 17, 2015, titled "System for Commercial Laundry Services and Facilities," U.S. Provisional Patent Application Ser. No. 62/220,183, filed on Sep. 17, 2015, titled "Communication and Control System for Commercial Laundry Machines," and U.S. Provisional Patent Application Ser. No. 62/220,171, filed on Sep. 17, 2015, titled "Interfacing with Automated Commercial Laundry Services and Facilities." The entirety of each of these applications is incorporated by reference into the present application. The present patent application is also related to U.S. patent application Ser. No. _____, titled "Communication and Control System for Commercial Laundry Machines," and U.S. patent application Ser. No. _____, titled "Interfacing with Automated Commercial Laundry Services and Facilities." The entirety of each of these applications is incorporated by reference into the present application.

BACKGROUND

[0002] Traditionally, commercial laundry businesses such as laundromats operate as cash-only businesses in which patrons use coins or tokens to feed into washers or dryers. This business model is not user-friendly, given the potentially large number of coins or tokens that may be required to enable a customer to wash and dry one or more loads of laundry. Some laundromats have attempted to eliminate the need for coins or tokens by providing value cards which may be purchased by customers. A customer may purchase a value card of a certain monetary value. To operate a washer or dryer, the customer may insert the value card into a reader attached to the washer or dryer, and the reader may deduct monetary value from the card and enable operation of the washer or dryer. However, this business model is also not user-friendly, given that it may require the user to carry monetary value on a card, thus rendering such monetary value unavailable to be spent by the user for other purposes. Moreover, many customers may not feel safe in a traditional laundromat given its nature as a publicly accessible facility that may not be staffed by employees at all hours of the day.

SUMMARY

[0003] Implementations of the present disclosure are generally directed to managing and controlling laundry machines to provide a laundry service. More specifically, implementations are directed to controlling laundry machine(s) through the use of remote signals that are sent based at least in part on a detected proximity of a mobile computing device to the laundry machine(s).

[0004] In general, innovative aspects of the subject matter described in this specification can be embodied in methods that include actions of: receiving a request for use of a laundry machine, the request sent by a mobile computing device responsive to a determination that the mobile computing device is in proximity to the laundry machine; determining a network address of the laundry machine indicated in the request; and sending a control signal to the

network address of the laundry machine, wherein the control signal causes an altering of an operational state of the laundry machine to enable use of the laundry machine during a period of time.

[0005] Implementations can optionally include one or more of the following features: the determination that the mobile computing device is in proximity to the laundry machine is based at least partly on detecting, using a wireless network interface of the mobile computing device, a beacon signal emitted from the laundry machine; the request includes a code that identifies the laundry machine and that is presented on or in proximity to the laundry machine; the code is presented in a scannable barcode of at least one dimension; the actions further include receiving an availability request for availability information describing currently available laundry machines, the availability request indicating a location of one or more of a user or the mobile computing device; the actions further include in response to the availability request, identifying one or more laundromats within a threshold distance of the location, the one or more laundromats including one or more currently available laundry machines; the actions further include sending, in response to the availability request, the availability information indicating the one or more laundromats that include the one or more currently available laundry machines; the actions further include receiving a reservation request for a reservation of at least one laundry machine at a particular laundromat of the one or more laundromats, the reservation request sent in response to a selection of the particular laundromat from the one or more laundromats, the selection made through a user interface (UI); the actions further include updating status information to indicate the at least one laundry machine as reserved; the actions further include sending at least one control signal to cause at least one status indicator of the at least one laundry machine to indicate a reserved status; the actions further include sending a response to the mobile computing device indicating the reservation of the at least one laundry machine at the particular laundromat; the actions further include selecting the at least one laundry machine from the one or more currently available laundry machines at the particular laundromat, based at least in part on an analysis of usage history of the one or more currently available laundry machines; the laundry machine is a washing machine; the period of time corresponds to at least one wash cycle of the washing machine; the laundry machine is a dryer; and/or the period of time corresponds to one or more increments of drying time associated with the dryer.

[0006] Other implementations of any of the above aspects include corresponding systems, apparatus, and computer programs that are configured to perform the actions of the methods, encoded on computer storage devices. The present disclosure also provides a computer-readable storage medium coupled to one or more processors and having instructions stored thereon which, when executed by the one or more processors, cause the one or more processors to perform operations in accordance with implementations of the methods provided herein. The present disclosure further provides a system for implementing the methods provided herein. The system includes one or more processors, and a computer-readable storage medium coupled to the one or more processors having instructions stored thereon which, when executed by the one or more processors, cause the one